

BENEFITS OF O

in Career and Technical Education

BY KIMBERLY METZ

Although only a very small portion of the U.S. K-12 students are taking online courses, interest in and attention to online learning is growing fast and furious. “The total number of K-12 students engaged in online courses—either full time or part time—is about 1,030,000, almost a 50 percent increase from 2005-2006, the Sloan report says”—(Miners, 2009, p. 12). Visionaries believe this online learning movement is just the beginning of a transformation of the school system for the first time in more than 50 years, when our current traditional industrial aged one-size-fits all system was implemented.

When thinking of building a school today, Jukes, Kelly and McCain (2008) state that we should no longer have “cookie-cutter classrooms,” and instead have schools as resource centers, where students learn their studies anytime or anywhere. The interest in the online learning movement is seen by the rapid increase in enrollment in online courses, especially in academics. For career and technical education (CTE), the online movement seems to be occurring at a much slower pace. The CTE field may want to increase its participation because of the world of possibilities that online courses may offer.

Education on Demand

Online courses provide students with many advantages: alternatives to the traditional school, courses that they cannot enroll in otherwise, opportunities for home schooling, ways to better meet the needs of the new digital age student, and a medium for receiving extra help. There are other benefits to online courses that may be useful for CTE programs. Some of these benefits include a possible solution to scheduling conflicts, new strategies to effectively work with students of different abilities, practices for improving test-taking, lifelong learning opportunities, team teaching, and addressing the digital student in a global world. However, while the use of online learning is growing rapidly, so are the challenges and concerns such as the cost and course quality.

With the implementation of new regulations and requirements such as those from No Child Left Behind and the Carl D. Perkins Act, there is a strong focus on increased academic excellence to prepare all students for the opportunity to enter college and the workforce. The focus on academic excellence has led to rigorous graduation requirements and can make a difference in whether a student pursues CTE courses or not. Implementing online courses may help address this problem. Traditionally, CTE programs consist of

theory and hands-on components. The theory portion of a CTE program can be the online component of a course; it can include reading, written assignments, videos, quizzes and other activities that can successfully be done online, while the hands-on component is completed in the traditional shop. By having the flexibility to participate in online learning anytime and anywhere, students who are enrolled in online CTE courses can participate in the online course components during convenient times. This most appealing advantage of online courses can provide flexibility for CTE programs.

Blended Courses

Evidence suggests that blended courses may be the most effective method of delivering online courses. The blended or hybrid approach is a combination of online learning and face-to-face instruction. Studies found that students in blended courses had better grades and improved comprehension, and that the courses increased interactions and freed up classroom space (Stansbury, 2009). “This allows not only an extension of the school day, but also of the school year, and enables more classroom-type activities to occur outside of the classroom walls”—(Pape, 2006, p. 4). Using this approach, students could take the

Online Courses



theory component of their CTE program online, therefore freeing up class time to study their academic subjects in order to meet their graduation requirements. Shared-time traveling students may no longer need to attend their CTE program five days a week, which would cut down an enormous amount of time spent on the bus and instead leave more time for instruction.

Helping Students of All Abilities Succeed

Another benefit that online courses may be able to offer to CTE are new strategies to effectively work with students of differ-

indicated that the second highest reason to take an online course was to work at their own pace (Pape, 2006).

Another benefit of online learning is its impact on test-taking. All CTE program graduates are required to take an exit exam such as the NOCTI exam or an industry-recognized credential exam such as a cosmetology license exam. A study conducted by the National Research Center for Career and Technical Education (Benson, Johnson, Taylor, Treat, Shinkarova, and Duncan, 2004) on distance learning in postsecondary CTE education concluded that: "CTE courses online appear to be an effective way for students to

others around the world.

CTE has the responsibility of preparing students for the future and for lifelong learning. As the online movement expands, students will benefit from the experience of an online course during their years in high school. Today, more than 90 percent of postsecondary schools offer online courses, including CTE courses. Guiding the student through the process of online learning in a semi-controlled environment will better prepare them for the future and for lifelong learning opportunities upon graduation. Through the blended approach, the CTE instructor can take an active role in mentoring the

**"Author LaFee stated that he envisions that online learning has a great potential to change the educational system, transforming schools as places to learn social skills, and where
teachers will become facilitators to learning."**

ent abilities. CTE instructors often find it difficult to teach the same curriculum to the array of students that they have in class. Online courses can provide students with the opportunity to work at their own pace, therefore reducing the time spent on waiting for everyone to catch up.

Some have found that online learning is helpful for all students. LaFee (2001) found that "students who are in the mid-to lower-third of achievement tend to do well with this technology if they are motivated because distance learning gives them more time" (p. 3). Florida Virtual School, one of the oldest online schools, emphasizes allowing students to go at their own pace, especially for advanced placement courses and for high-risk drop-outs. Students agree that having the opportunity to work at their own pace is an attractive feature. In one survey, students

prepare for national board examinations" (p. 54). Students who took online courses were more successful in passing the exam the first time than those who took the same course on campus. Although this has not been studied at the secondary level, the possibility exists.

Team teaching can be an added benefit for CTE instructors. Using the blended model, online courses can be taught by longtime professionals in the occupational fields who are knowledgeable of the opportunities that technology can offer. CTE instructors can benefit from new teaching strategies, expanded curricula and increased student motivation by reaching the digital age student. Sturgeon (2008) states that teaching technology, including online learning, improves the teacher's technology skills, instructional skills and gives them connections to

student to complete the online course, to become an independent learner and to set goals.

Cooper, Horn and Strahan (2005) described a study of seven high school English teachers who promoted goal-setting and self-regulation in their classes by providing challenging activities in setting and meeting goals. They also taught students how to self-regulate. In return, students became more responsible and enthusiastic and asked more questions, set goals and had better perceptions about their own learning. This type of guided instruction may be needed for students to gain the satisfaction of completing their first online course.

Online learning also addresses the new digital age student. Research has shown that online instruction is a strategy that can enhance and expand the skills of the

21st century digital learner (Daggett, 2008). According to Jukes, Kelly and McCain (2008), this transformation has created major shifts to higher order thinking skills; changes in the way students learn, think and act; the amount of knowledge that can be accessed; and the applications to the global world. The authors state that schools must offer more choices to reflect the new digital age student.

Access to Equipment

Although there is a long way to go, there have been a lot of advancements made with online learning, including the cost involved and the quality of an online course. For example, the cost of equipment and infrastructure has been a burden to most districts over the last century. However a lot of progress has been made to equip schools and homes with computers and Internet capabilities. The number of locations to access the Internet is increasing while the cost of equipment is decreasing.

Netbooks, for example, are mini-type computers that "are proving to be effective one-on-one learning tools for students and with a price range starting at about \$200, a good buy for districts with tight budgets"—(Dessoff, 2009, p. 47). Netbooks are being explored as a 1:1 student netbook ratio, because of the low cost and as a way to provide students with 24/7 access to school work and the World Wide Web.

A comprehensive high school in New Jersey surveyed its students and found that many of the students had access to a computer at home, but they had to share it with other family members. The results supported the idea to pilot a 1:1 netbook approach giving the students 24/7 access. For those students who did not have Internet service, a deal was struck with the local Internet provider. The goal of the project initially was for a range of students with different abilities to use the netbooks in every class—eventually to graduate with a social network of contacts and an

understanding of how to effectively access the world database. To date, the findings indicate much greater enthusiasm and support for the use of the netbooks. For CTE, this could be a powerful tool to provide CTE students with an opportunity to expand their CTE field of study, and spend face-to-face time with their CTE instructor more effectively and efficiently.

Quality Control

The National American Council for Online Learning (NACOL) used research and surveys to develop standards for quality K-12 online courses to ensure consistency and validity. As a result of the research review, NACOL has endorsed the works of Southern Regional Education Board, which is used in 16 states (NACOL, 2008). Although online learning has been around for a decade, just recently, in 2008, the U.S. Department of Education's first guide to evaluate K-12 online learning programs became available.

Moving Forward with Online Learning in CTE

Online courses today may be able to positively impact CTE programs. Although online courses have not transformed schools today as the visionaries suggest, the rapid increase of enrollment in online courses may be a true indication that the movement is quickly approaching. Whether it is online courses or technology in general, the transformation will continue to have an important role in the future.

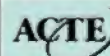
Author LaFee (2001) stated that he envisions that online learning has a great potential to change the educational system, transforming schools as places to learn social skills, and where teachers will become facilitators to learning. He believes that students have taken the initiative to learn for themselves, and by themselves. CTE needs to be ready for this transformation—and to begin to take advantage of online learning. ■

References

- Benson, A. D., Johnson, S. D., Taylor, G. D., Treat, D., Shinkareva, O. N., and Duncan, J. (2004). *Distance Learning in Postsecondary CTE: A Comparison of Achievement in Online vs. On-campus CTE Courses*. St. Paul, MN: University of Minnesota, National Research Center for Career and Technical Education.
- Cooper, J., Horn, S., and Strahan, D. (2005). "If Only they Would do their Homework." In K. Cauley & G. Pannozzo, *Educational Psychology* (pp. 151-161). New York, NY: McGraw-Hill.
- Daggett, W. R. (2008, June). *Preparing U.S. Schools for the 21st Century: A Coherent Systems Approach*.
- Dessoff, A. (2009, June/July). "A Netbook for Every Student." *District Administration*, 47-50.
- Jukes, I, Kelly, F. and McCain, T. (2008, November). *Teaching the Digital Generation*.
- Miners, Z. (2009, March). "Pennsylvania Online Schools Struggle Amid Bad Economy." *District Administration*, 12.
- North American Council for Online Learning. (2008). *National Standards of Quality for Online Courses*.
- Pape, L. (2006, August). "From Bricks and Clicks: Blurring Classroom/Cyber lines." *The School Administrator*, 7 (63).
- Stansbury, M. (2008, April, 3). "Hybrid Courses Show Promise." *eSchoolNews*.
- Sturgeon, J. (2008, November/December). "Why 21st Century? Four Reasons Schools Should Reinvent their Classroom this Year." *EDTECHMAG.com*, 39-40.

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